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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,156	05/31/2005	Yuichiro Miyamae	2005-0835A	1453

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WENDEROTH, LIND & PONACK, L.L.P.  
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SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER
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PERRY, ANTHONY T

ART UNIT	PAPER NUMBER
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2879

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/537,156

Applicant(s)

MIYAMAE ET AL.

Examiner

Anthony T. Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Claim Objections***

Claims 3-4 are objected to because of the following informalities: the elements Zn, Si, and Mn are within brackets. Since brackets are used to indicate deleted subject matter, the brackets should be removed to avoid confusion. Appropriate correction is required.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 10/5363692. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

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Current U.S. Application SN 10/537156	Copending U.S. Application SN 10/536362	Reasons for rejection under obviousness-type double patenting
Claim 1	Claim 1	Application '362 claims a plasma display panel in which a plurality of discharge cells are arranged, and a phosphor layer in color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including $\text{Zn}_2\text{SiO}_4\text{:Mn}$ having a range for the element ratio of zinc (Zn) to silicon (Si) includes 2/1, which is a stoichiometric ratio at a proximity of a surface thereof.
Claim 2	Claim 2	Application '362 claims a plasma display panel in which a plurality of discharge cells are arranged, and a phosphor layer in color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including $\text{Zn}_2\text{SiO}_4\text{:Mn}$ having a range for the element ratio of zinc (Zn) to silicon (Si) that includes 2/1, which is the stoichiometric ratio at a proximity of a surface thereof, and is positively charged or zero-charged.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishimura et al.

(US 1,037,156).

Regarding claim 1, Nishimura teaches a plasma display device including a plasma display panel in which a plurality of discharge cells are arranged, and a phosphor layer in color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including  $\text{Zn}_2\text{SiO}_4\text{:Mn}$ ; and the green phosphor made of  $\text{Zn}_2\text{SiO}_4\text{:Mn}$  has an element ratio of zinc (Zn) to silicon (Si) of 2/1, which is a stoichiometric ratio at a proximity of a surface thereof (for example, see col. 1, lines 16-20 and col. 4, lines 23-25).

Regarding claim 2, Nishimura teaches a plasma display device including a plasma display panel in which a plurality of discharge Cells are arranged, a phosphor layer in a color corresponding to each discharge cell is disposed, and the phosphor layer emits light by being excited by ultraviolet light, wherein the phosphor layer has a green phosphor layer including  $\text{Zn}_2\text{SiO}_4\text{:Mn}$ ; and the green phosphor made of  $\text{Zn}_2\text{SiO}_4\text{:Mn}$  has an element ratio of zinc (Zn) to

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silicon (Si) equal to a stoichiometric ratio (2:1) at a proximity of a surface thereof, and is positively charged or zero-charged (for example, see col. 1, lines 16-20 and col. 4, lines 23-25). Nishimura does not specifically recite the charge of the phosphor, but since Nishimura teaches the same ratio of Zn to Si, 2:1, it is understood that the charge will be the same as the phosphor recited by the applicant.

*Allowable Subject Matter*

Claims 3-4 are objected to, as explained above, but would be allowable if the objections are overcome.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record fails to disclose or fairly suggest:

- A method of producing a phosphor wherein Zn and Si in a ratio of 2:1 is mixed with salt and water which is dried then pre-fired in air at 600°C to 900°C producing a pre-fired matter and then the pre-fired matter is fired at 1000°C to 1350°C, in combination with the remaining claimed limitations as called for in claim 3.
- A method of producing a phosphor wherein a raw material of oxide and/or carbonate including elements of Zn, Si, and Mn are mixed and then fired in air at 600°C to 900°C producing a pre-fired matter and then the pre-fired matter is fired at 1000°C to 1350°C, in combination with the remaining claimed limitations as called for in claim 4.

### Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (571) 272-2459. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (703) 872-9306.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Art Unit 2879  
February 2, 2007



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